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Kelly K. Kordzik, Esq.
Winstead Sechrest & Minick
5400 Renaissance Tower
1201 Elm Street
Dallas, TX 75270

EXAMINER

CUEVAS, PEDRO J

ART UNIT

PAPER NUMBER

2834

DATE MAILED: 06/04/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/056,371

Applicant(s)

PENDELL, LARRY STUART

Examiner

Pedro J. Cuevas

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 April 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 and 13-16 is/are rejected.
- 7) ☒ Claim(s) 12 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 1, 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Specification

1. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-11, and 13-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,896,063 to Roberts in view of U.S. Patent No. 4,187,457 to Wanlass.

Roberts disclose the construction of electromagnetic induction devices with multi-form winding and reflected magnetizing impedance comprising:

- a cylindrical stator (16);
- a rotor (12) axially rotatable positioned in the center of said stator;
- rotor windings (column 6, line 56) integral to said rotor;
- a three-phase energy winding (column 6, line 58) integral to said stator and magnetically coupled to said rotor windings;
- a first three-phase auxiliary winding (WBx) integral to said stator and magnetically coupled to said rotor windings and electrically isolated from said energy

winding, said three-phase auxiliary winding comprising three branch windings electrically coupled forming three-phase electrical terminals (Figures 3a and 3b); and a first capacitor (CB_x) electrically coupled across each of said three-phase electrical terminals.

However, it fails to disclose a second, third and fourth unequal capacitors coupled with a first, second, and third branch switches across a portion of a first one of said three branch windings, and a control circuit for gating said first branch switch in response to parameters of a first voltage corresponding to a first selected branch winding and parameters of a voltage and a current corresponding to said energy winding.

Wanlass teach the construction of a poly-phase electric motor having controlled magnetic flux density, and comprising:

a second capacitor (28a) coupled with a first branch switch (50a) across a portion of a first one of said three branch windings;

a third capacitor (28b) is coupled with a second branch switch (50b) across a portion of a second one of said three branch windings;

a fourth capacitor (28c) is coupled with a third branch switch (50c) across a portion of a third one of said three branch windings;

said branch switches being electronic switches operable to conduct alternating current (AC) when gated on; and

a control circuit (column 4, line 41 to column 5, line 14) for gating said first, second, and third branch switch in response to parameters of a first voltage corresponding

to a first selected branch winding and parameters of a voltage and a current corresponding to said energy winding, for the purpose of providing a motor that can be operated at a maximum flux density under most conditions of line voltage without resulting in extremely high input current for high input voltages.

It would have been obvious to one skilled in the art at the time the invention was made to use the poly-phase electric motor having controlled magnetic flux density disclosed by Wanlass on the electromagnetic induction device with multi-form winding and reflected magnetizing impedance disclosed by Roberts for the purpose of providing a motor that can be operated at a maximum flux density under most conditions of line voltage without resulting in extremely high input current for high input voltages.

Roberts in view of Wanlass discloses the claimed invention except for the windings being integral to the stator. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use integral windings, since it has been held that forming in one piece an article, which has formerly been formed in two pieces and put together, involves only routine skill in the art. *Howard v. Detroit Stove Works*, 150 U.S. 164 (1893). The term "integral" is sufficiently broad to embrace constructions united by such means as fastening and welding. *In re Hotte*, 177 USPQ 326, 328 (CCPA 1973).

4. With regards to claims 5-10, Roberts in view of Wanlass disclose a machine wherein:
 - said first voltage corresponds to the voltage across said second capacitor;
 - said parameters of said voltage of said energy winding comprise the output voltage amplitude across a phase of said energy winding supplying a load;

said parameters of said current of said energy winding comprise the output current amplitude in a phase of said energy winding supplying a load across a phase said energy winding;

said parameters of said voltage and current of said energy winding comprise the phase relationship of said voltage and said current of said energy winding resulting from a load across said phase of said energy winding;

said parameter of said first voltage corresponds to a measure of the zero crossing time of said first voltage; and

where said branch switch is gated on based on a first value of said parameter of said first voltage and gated off based on a second value of said parameter of said first voltage.

Allowable Subject Matter

5. Claim 12 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. The following is a statement of reasons for the indication of allowable subject matter.

The prior art of record, taken alone or in combination, fails to teach the construction of a rotary induction machine as claimed on independent claim 1, further comprising:

a second three-phase auxiliary winding integral to said stator and magnetically coupled to said rotor windings and electrically isolated from said energy winding, said second three-phase auxiliary winding electrically isolated from and magnetically coupled

to said first auxiliary winding, said second auxiliary winding comprising three branch windings electrically coupled forming three-phase electrical terminals;

a fifth capacitor electrically coupled across each of said three-phase electrical terminals of said second auxiliary winding; and

a sixth capacitor coupled with a fourth branch switch across a portion of a first one of said three branch windings of said second auxiliary winding.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See PTO-892.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pedro J. Cuevas whose telephone number is (703) 308-4904. The examiner can normally be reached on M-F from 8:30 - 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor R. Ramirez can be reached on (703) 308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-1341 for regular communications and (703) 305-3432 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



Pedro J. Cuevas
June 2, 2003